

Lufkin[®]

LR510 Self Levelling Rotary Laser Level

USER GUIDE

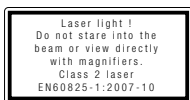


Lufkin LR510

Horizontal self-levelling by magnetically-dampened pendulum system, vertical alignment via adjustable base. Laser 635 nm, accuracy 2 mm / 10 m, dust and splash protected to IP 54. Self-levelling range, 3.5° with tilt alarm. For all horizontal and vertical alignment work. The plumb up vertical reference beam is suitable for dropping a perpendicular line or for aligning partition walls. The wall/floor bracket can be used to level the unit vertically or fasten it to a wall.

General safety instructions

Caution: Never look directly into the beam. Lasers must be kept out of reach of children.



Never intentionally aim the device at people. This is a quality laser measuring device and is 100% factory adjusted within the stated tolerance. For reasons of product liability, we must also draw your attention to the following: Regularly check the calibration before use, after transport and after extended periods of storage. We also wish


to point out that absolute calibration is only possible in a specialist workshop. Calibration by yourself is only approximate and the accuracy of the calibration will depend on the care with which you proceed.

Note: This product is a precision instrument that must be handled and treated with care. Avoid shocks and impact. Always keep and carry in the case! Switch all lasers off and secure the pendulum when not in use. For cleaning, use a soft cloth and glass cleaner.


Warranty:


The warranty period is two years from the date of purchase. The warranty covers all material and manufacturing defects occurring during this time. The following are excluded from warranty: Damage due to improper use (e.g. connection to an unsuitable power source, falling onto a hard surface, etc); improper storage; normal wear and tear; minor defects not impairing operation. Any tampering by unauthorized persons will render the warranty void. In the event that you need to claim warranty, please return the complete device together with proof of purchase to the place of purchase or to the Service and Shipping address on the back page.




Note: During transport and in vertical operation, make sure that the pendulum lock is set to “lock”  failure to do so may result in damage to the device.

Horizontal use of LR510

- Set up the LR510 on a surface that is as level as possible or fasten it to a tripod.
- Turn the pendulum lock in the arrow's "Unlock"  direction to its limit. This releases the locking mechanism that protects the pendulum during transport.
- Press the On/Off button.
- Within its range of $\pm 3,5^\circ$, the LR510 will level itself automatically and the prism head will begin to turn.
- The speed of rotation can be changed using the up & down buttons from 100 - 300 RPM.

Note: Always unlock the pendulum lock when the LR510 is being used for horizontal levelling by turning the transport lock to its "Unlock"  position. If the unit is currently outside of its automatic levelling range ($> 3,5^\circ$), a warning signal will sound and the prism head will not rotate. The unit must then be placed on a surface which is closer to level. When in vertical use, the unit does **not** level itself automatically.

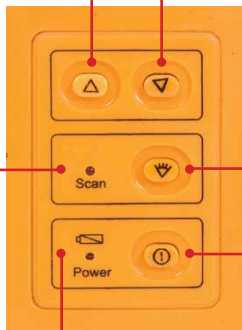
Vertical use of LR510

- Turn the pendulum lock in the arrow's "Lock"  direction to its limit.
- Insert the vertical operation foot into the vertical foot receptacle and adjust the foot until the vertical operation vial is centered between the centre markings.
- Press the On/Off button. The prism head will begin to rotate.

Control Panel:

Laser Speed & Scan Direction Button:
In continuous rotation mode: Increase speed
In scan mode: Scan range shifts clock wise

Laser Speed & Scan Direction Button:
In continuous rotation mode: Reduce speed
In scan mode: Scan range shifts counter clock wise



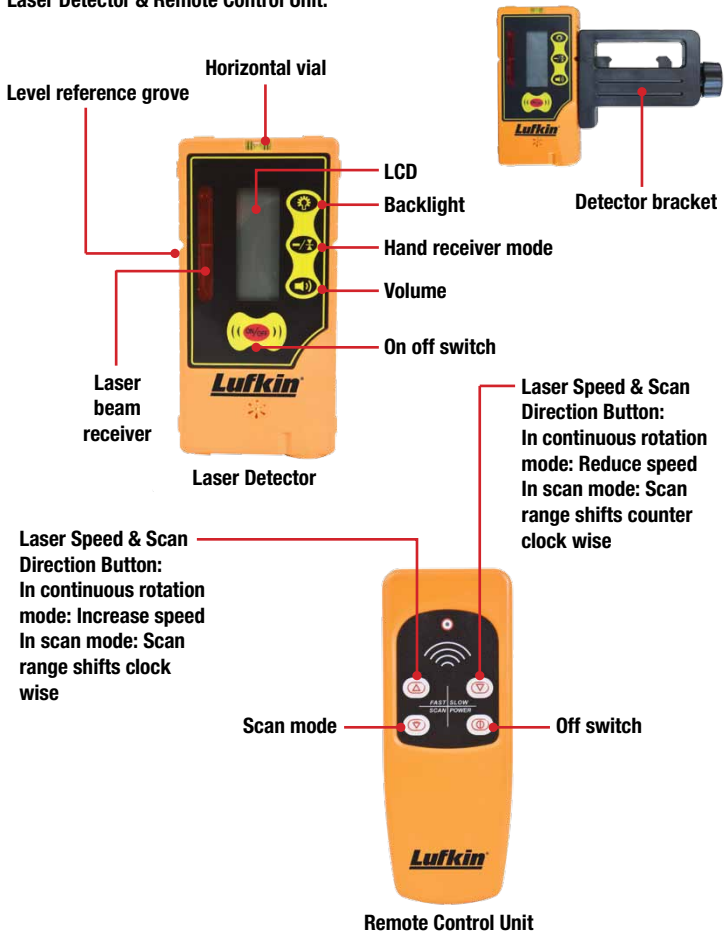
Scan mode button

On/Off button: push the button to power the laser on or off

SCAN MODE INDICATOR:
CONTINUOUS GLOW indicates continuous rotation
FLASHING indicates scan

Power Indicator:
GLOWING indicates ON
NOT GLOWING indicates OFF
FLASHING indicates LOW VOLTAGE, (recharge batteries)

Laser Detector & Remote Control Unit:



Gradient Mode:

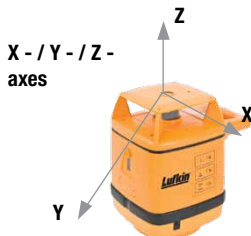
- Turn the pendulum lock in the arrow's "Lock" direction to its limit. Now the tilt function is inactive and the unit cannot align itself automatically.
- Press the On/Off button. The prism head will begin to rotate.
- The speed of rotation can be changed using the up & down buttons.
- Adjust the unit to the desired angle. Slope angle can be set precisely and quickly with the aid of the optional tilt plate, Part No.: LTP1



Important: Horizontal levelling cannot be accomplished in gradient mode because the unit cannot automatically level itself.

Note:

Regularly check the calibration before use, after transport and after extended periods of storage. Always make sure to check all 3 axes.



Operation of the LR510

- Open the battery compartment, insert the battery pack with the exposed metal ends of the battery pack aligned with the + & - terminals (see pictures on right). Close the battery compartment.

Charging the batteries

- Before using the LR510, fully charge the batteries.
- Connect the battery charger/mains unit to a mains source and plug into the socket. Please only use the charger/mains unit supplied with the device. If a different one is used, the warranty will become void.
- If the LED blinks constantly, either the batteries must be exchanged or recharged.



Insertion of batteries in the detector

- Remove the battery cover (9) and insert the batteries as shown by the installation symbol, ensuring that the polarity is correct. Then replace the cover.
- To extend battery life, the receiver switches off automatically after about 5 minutes if not used.

Note: Do not expose batteries to excessive heat such as sunshine, fire, etc. Dry batteries must not be recharged. Used batteries must not be disposed of as household waste. Please take them to a collection point for used batteries or for special waste. Ask your local authority for further details.

Technical Specifications

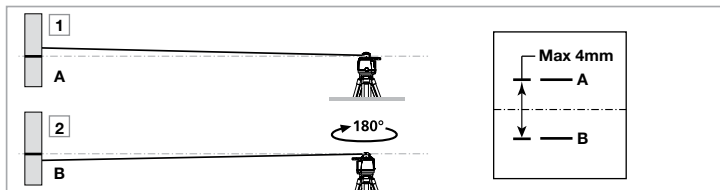
LR510 Specifications	
Self-levelling range	± 3.5° (horizontal)
Accuracy	± 3mm / 10m
Vertical levelling	manual
Perpendicular reference beam	90° to rotation plane
Rotation speed	100 - 300 rpm
Laser wavelength	635 nm
Laser	Class IIIA (EN60825-1:2007-10)
Laser output rating	≤ 5 mW
Rechargeable Batt. / batt. operating time	approx. 20 h / 45 h, 4 x type AA
Battery recharging time	approx. 14 h
Working temperature range	-10°C - +40°C
Protection class	IP 54
Weight	1.65 kg

Laser Receiver	
Batteries / Power supply	4 x type AA
Battery life	approx. 70 h
Laser reception range: SensoLite 210	200m
Operating temperature	0° ... 50°C
Storage temperature	-10°C ... 70°C

Calibration Check

To check the calibration of the LR510 Laser, place the Laser on a surface or preferably a tripod approximately 10m from a wall or post with the control panel away from the wall or post.

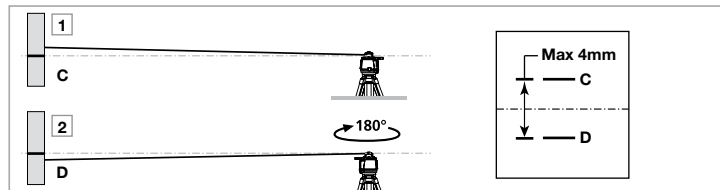
1. Release the pendulum lock and switch on the Laser.
2. Mark the level point on the wall or post and label this point "A" using the detector.
3. Rotate the Laser on the surface or Tripod 180°. Be certain NOT to move or adjust the tripod. Mark the level point on the wall or post and label this point "B". You have now checked the "Y" axis.



The point half way between points "A" and "B" is true level. If "A" and "B" are 4mm apart or less then no adjustment is required.

To check the "X" axis, rotate the level by 90° so that one of the sides is towards the wall or post.

4. Mark the level point on the wall or post and label this point "C".
5. Rotate the Laser on the surface or Tripod 180° so that the other side is towards the wall or post. Be certain NOT to move or adjust the tripod. Mark the level point on the wall or post and label this point



"D". You have now checked the "X" axis. The point half way between points "C" and "D" is also true level and should be the same as that noted for the "Y" axis above. If points "C" and "D" are 4mm apart or less then no adjustment is required. To adjust the LSL160 remove the plastic cross recess screw in the axis requiring adjustment. The "Y" axis is adjusted using a 2.5mm Allen key and adjust the "X" axis screw using a 2mm straight blade screwdriver.

Note the maximum adjustment is 20mm so if more than this is required then return the Laser to Apex Tool Group service dept.

Limited Lifetime Guarantee

Apex Tool Group quality products are Guaranteed against any defect in material or workmanship. Damage caused by abuse, improper use or excessive wear is not covered by this warranty.

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Claims should be returned, with proof of purchase, to the place of purchase or returned prepaid to the address below. Repaired or replacement goods will be returned at our cost.

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